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"God Bless the Man who sows the wheat,
Who finds us milk and fruit and meat;
May his purse be heavy, his heart be light;
His cattle and corn and all go right;
God bless the seeds his hands let fall,
For the farmer he must feed us all."

The Washington Convention Report is now in pamphlet form, and we shall be pleased to mail a copy to any one desiring it, for 25 cents. It contains 32 pages. As only a very limited number were printed, you should order promptly if you want a copy.

Mr. Frank McNay, of Mauston, Wis., gives in *Gleanings* a comparative statement of the honey produced during 16 years (from 1876 to 1891, inclusive) in the famous "Sespe" apiary in California, and his own apiaries in Wisconsin. It is an interesting table, showing that 73 pounds per colony was the total average of the California apiary, and 93 pounds per colony of Mr. McNay's apiaries. Mr. M.'s best crop in any one year was 23 tons; best gain from one colony, 31 pounds in one day; and 335 pounds from a single colony in one season.

Questions and Answers.—As there are always new members coming into the BEE JOURNAL family, it becomes necessary to repeat at intervals what should be understood about asking questions. The subscriber who thinks he is entitled to nothing more than to find what happens to come in our columns ready printed, whether it fits his particular case or not, is making a great mistake. It is no grievance for us to be obliged to answer questions. That's what we're here for; to tell, just so far as we know how, what you want to know. Not but what there are plenty of questions to be asked in bee-keeping that we cannot answer—how we wish we could answer all—but there are also plenty we can answer.

Too often it is the case that some beginner feels that he does not want to be troublesome, and so refrains from asking questions. Let such a one please remember that there are others just like himself, and that we are glad to have questions for the general good. Any one who has mastered to a considerable extent the contents of one of the standard text-books on bee-culture, and then finds a point on which he has a question, will be doing us a favor to send it.

On page 333 of this number, we begin a new department, called "General Questions," in which we will endeavor to accommodate those questions that can be just as satisfactorily answered by one person, and also such as demand an immediate reply in order for such reply

to be of any value. Principally it will be an editorial department, and, we trust, will prove to be interesting and profitable to all.

But bear in mind that it *takes time* to get questions "through the mill," and don't expect an answer by return mail. Sometimes there is a mass of matter on hand, and your questions may have to wait some little time; and even if it does not have to wait, but is pushed through with the greatest rapidity, if it happens to reach us on the day when the "forms" are closed for the next BEE JOURNAL, it must be some days before it can be reached, and then Uncle Sam must have a little time for his part of the contract.

So remember that all reasonable questions are not only permitted, but welcomed. Make your questions as clear as you can, and be sure to ask them so there will be plenty of time for answer. Just as soon as your question can be reached, you will find the printed answer in our columns. Of course, questions of such character as to go into the department of "Queries and Replies" may not be published for a good many weeks, for such questions are sent out a number at a time to the experts for answer, taking some time to get such answers, and then they are published in their order afterward.

The Review said recently that "G. T. Somers is the name of a pleasant, nice looking young man who has been editor of the *Canadian Bee Journal* for the last year. I met him last week at the Ontario Bee-Keepers' Convention. Practically, Mr. D. A. Jones has nothing more to do with the *Canadian Bee Journal*."

The Exports of Honey from the United States during 1892 were valued at only \$42,462, against \$70,771 in 1891. No record is made of any importation in the statement of the Treasury Department.

Illinois Bee-Keepers must act at once, if they wish to secure the annual appropriation of \$500 from the State Legislature. Here is a letter dated March 9th, which fully explains itself:

BRADFORDTON, Ills.

FRIEND YORK:—A Bill has been presented in the House of Representatives to provide for the usual appropriation of \$500, for the purpose of publishing the report of the Illinois State Bee-Keepers' Association. A similar Bill has been presented in the Senate, and was, by a small majority, not favorably received.

Unless the bee-keepers of the State act immediately, it will share the same fate in the House. It is therefore of the utmost importance that bee-keepers write to their respective members of the House and Senate, urging the early and favorable consideration of the said Bill.

All are requested to write each of their three Representatives, and Senator as well, from their District, and as strongly as possible urge upon each the importance of the measure to bee-keepers interested in developing the industry throughout the State.

Let all please favor the undersigned with the letters they receive in reply, in order that the Legislative Committee may be fully advised of the interest or opposition to the same in the House and Senate, and advocate the early passage of the Bill. Yours truly,

JAS. A. STONE, Sec.



G. W. DEMAREE, ESQ.

So far as as we remember, we have never before seen either a biographical sketch or a portrait of Mr. G. W. Demaree, of Christiansburg, Ky., in any publication; so we are afforded the pleasure of presenting for the first time, to the readers of the BEE JOURNAL, the face and short life-story of Mr. D., who is so well known as one of the oldest

contributors to our columns, both by his answers to queries every week, and by an occasional contribution—all of which show practical experience and an educated mind.

Mr. Demaree is of Huguenot stock, and was born in Henry county, Ky., on Jan. 27, 1832. His father owned a large farm, and, in those days, was considered "well to do." The farming operations were carried on quite extensively, and young Demaree was brought up to do *all work* on the farm, and, with his brothers, was exceedingly fond of



G. W. DEMAREE.

breaking and training the large number of fine horses they reared.

In the old-fashioned yard was to be seen a long row of bee-hives perched on a platform of puncheons, and protected from the sun and rain by a narrow shed erected over them. Mr. D. was his father's main reliance for help with the bees. He was a natural mechanic, and helped make the necessary bee-hives and "honey-caps," and later on made them without any help. Many of those box-hives were nicely "dressed" and painted.

At an early age he developed a remarkable interest in insect life, especially in honey-bees, and was never happier than when prying into the ways of bees and other insects. Amid all these busy scenes his education was not neglected, and being an enthusiastic aspirant for knowledge, as well as an untiring stu-

dent, he outstripped many of his age who had spent much more time in the school-room.

When he reached manhood he left home and went West, where he continued his studies, attending school and working at the mechanic's business. The year 1855 found him in the (then) wilds of Upper Missouri and Kansas. In the past he has published in newspaper articles a description of the wild bees he saw while on that trip to the new West.

In 1856 he was again found on the old farm, in his native State. The "boys" indulged their slang by declaring that "calico" was the attraction! And perhaps this was nearer the truth of the situation than they themselves believed, for in 1857 he was married to the woman of his choice, and began life in earnest. Once on a farm of his own, he began his career as a bee-keeper, and "began to invent new bee-gums with much enthusiasm."

Then followed the unhappy years of the Civil War. The terrible scenes he witnessed—the bending over the prostrate form of a cherished brother, with a bullet hole through his body; men with shattered limbs, and dead men with their boots on—will haunt his memory until "He that sitteth upon the throne" shall "make all things new."

The war over, Mr. Demaree left the farm, and entered the practice of the law, and from thence his life became an exceedingly busy one. He has held public trust in his county (Shelby) for 25 years, three years of which he was chairman of the Board of Public Charity of the county—a most difficult and delicate position, owing to the increase of poverty by reason of the sudden emancipation of the colored people.

During these years Mr. D. has found time to manage an apiary of not less than 50 colonies, reared queens, and produced profitable crops of honey. In May and June he can always be found in his apiary, and is ready to "talk bees" with all visitors. In the past two years he has retired from the greater part of the business that has engaged his attention, and now enjoys more leisure, and is happier than ever before.

Mr. D. has been a member of the Presbyterian church for 37 years, and is an Elder in his church. He is a firm believer in the pre-millennial advent of Christ, having given the subject much study, and now believes that the "signs of the times" warrant the belief that we are nearing the world's great crisis, which will culminate in the promised "restitution of all things."

THE LAND OF DZIERZON

CONDUCTED BY

H. REEPEN,

JUGENHEIM, HESSEN, GERMANY.

Apicultural Notes.

SPERMATIC ANIMALCULES IN BEE-EGGS.—Mr. Faylor believes, and it seems that Prof. Cook does too, that sperm-cells cannot be discovered in bee-eggs with any kind of microscope. Prof. von Siebold discovered sperm-cells in bee-eggs about 40 years ago, and the microscopes at that time were not the very best ones. If Siebold had not discovered them, there would not have been a scientific sanction of the ideas of Dzierzon up to now. Is that true? No! It is a fact that the doctrine of Dzierzon is acknowledged by everybody now-a-days.

QUEEN LAYING WORKER-EGGS IN DRONE-CELLS.—Rev. Faylor says in the *AMERICAN BEE JOURNAL*, "If you want drone-bees, give a good colony nothing but drone-comb. All eggs layed in drone-cells produce only drone-bees." Pardon, but that's not correct. The queen is more clever than many think for; she does not like too many drone-bees, and if you give her nothing but drone-comb, she will soon lay fertilized eggs, notwithstanding the drone-cells; and it is strange that the worker-bees, which come from them, are not a bit larger than those fed up in worker-bee cells.

This experiment has already been made in Germany, by Grunhagen, Oerpke, and afterwards by the well-known Vogel.

QUEEN AND SPERMATIC CELLS.—The queen is able to produce spermatid cells herself. Mr. Metzger, at Budapesth, has recently published a surprising research about the seminal vesicle (*receptaculum seminis*) of the queen. Up to now the microscopical researches of Prof. Leuckart and Prof. von Siebold, who, together with Berlepsch, first proved Dzierzon's marvellous doctrine of the Parthenogenesis to be right, have been standard; but now Metzger has corrected part of these researches, and added a highly interesting fact. He says:

"The statement of Prof. Leuckart, that the seminal vesicle of the queen is

large enough to accept millions of spermatid animalcules at once, is not correct—it is much too small for that, and the spermatid animalcules cannot live for three to five years in the seminal vesicle of the queen, as is believed to-day. The seminal vesicle is a 'gland,' and has therefore secretions which consist of an opalescing liquid containing cells without nucleus. After the copulation, all these cells have a nucleus, and one can see the spermatid animalcules in all kinds of sizes, part of them *just leaving the cells*. This is a proof that the spermatid animalcules can be increased in number *by the queen herself*. If a queen is killed during spring-time, when the seminal vesicle is filled with spermatid animalcules, one can even see that the spermatid animalcules are trying to leave the cells even before the cells have got rid of the mucous membrane of the gland. During winter-time there are only very few sperm animalcules in the seminal vesicle, and still in spring the queen is able to lay up to 3,000 eggs a day, and each egg wants at least one sperm animalcule for fertilization."

This is quite a new view, and a good many of the men of letters will be surprised at this doctrine. Dzierzon thinks favorably of it. He says that he sometimes has noticed that an Italian queen mated to a German drone, in the third year, did not produce any more hybrids, but pure Italians. There was no statement as to this curious fact up to now, but the discovery of Metzger will attest it.

That's something for Prof. Cook!

H. REEPEN.

The Sting Trowel Theory is thus referred to by Prof. Wm. F. Clarke, of the Ontario Bee-Keepers' College, at Guelph, Ont., Canada:

Permit me to say that "Whoever the I may be" who figures in the English journals mentioned on page 137 of your issue of Feb. 2nd, is not me, nor have I any knowledge who it is. The quotation is taken bodily from my "Bird's-Eye View;" nor has the writer gone a step farther than I, in assigning to the formic acid (not the sting) the duty of flavoring the honey. I believe that the bees, as Cheshire happily phrases it, add "droplets" of formic acid to the honey as they store it, and smear some on the cappings in the finishing touches which they give them. WM. F. CLARKE.



CONDUCTED BY

Mrs. Jennie Atchley,

GREENVILLE, TEXAS.

Our School in Bee-Keeping.**FIFTH LESSON—PRODUCING HONEY ON A LARGE SCALE.**

You must, to be a successful beekeeper, study your honey locality, and know just about what time each plant blooms, and be *very* particular to note down those that give you your crops. Work your bees to have them ready to catch all you can, as a few days too late has lost a good part of many a bountiful harvest.

Now we will go through the operation of producing honey on a large scale—say an apiary of 100 colonies or more. This is an important lesson, and pay strict attention, as I would not have you to fail now for a good, big sum.

Producing honey on a large scale is the same as on a small scale, except that it seems our skill must be greater to make a large apiary pay as well as a small one, in proportion. But after we get the “hang of it,” it is easier to get our bees in good condition to gather in the harvest, as we have more bees, and can take from one and help another, and get the whole apiary in about the same shape to catch the harvest. I know that some apiarists don’t approve of doing this, but where it can be done long before the honey-flow, it is the best thing to do, as we can have our colonies all equalized in time for them to start off on the sections, or in the extracting supers, at the same time.

It is no use to be wasting brood on a colony that has a poor queen. You had better pinch her head off at once, and let them rear a queen, or give them one from some other source. One of the main reasons why we fail in a large apiary is, we neglect our duty, and do not have our extra hives, supers, and sections all ready, just because it is a bigger job. And now I will tell you that

it is just as important to prepare for 100 colonies as it is for one, or more so, as the loss is not so great with a few. But, to sum it all up, we can make a large apiary pay as well as a small one if we will be up and doing, and attend to everything as we should. I mean, a large apiary will pay as well as a small one, unless we overstock a pasture, and we should look sharp and not do this, and when we see that we are overstocking, divide our bees out into out-apiaries. But when a good year comes, there is not much danger in overstocking in this locality; however, when we see that we are going to have a poor year, it is best to give the bees better range by moving them to out yards.

By all means do not think of using but one size of frame in your yards, as it is a serious mistake, as you cannot manipulate your apiary to advantage.

Now, when you get to 100 colonies, you may, if you wish, make increase enough every year to make an out-yard until you get all the bees your brains can manage, and in this you will have to be governed as you go along; and when you get as many as you are making pay, you had better stop; do not be mistaken about this, as you are in a shape now to lose something, should you fail. But please bear in mind that you *must* not try to increase your bees in poor seasons, rather decrease, if anything.

The Summerland of Florida.

Suffering greatly with sciatic rheumatism in Grand Meadow, Minn., and finding no relief among the Minnesota doctors, I was, in November last, banished, so to speak, for the winter, at least, to Florida—the perpetual summerland. Here in the warm sunshine and balmy air relief has so far come as to enable me to walk without crutches or cane.

Before leaving my home, the bees were carefully stored in a dark department of my cellar, and I bade them an affectionate farewell for the long, cold winter. How I have wished to have them here with me, to share my banishment, and that they might revel in the blossoms of February. For a week past, the peach, plum, cherry, blackberry, yellow jessamine, and other blossoms, have been in full beauty, and the bees are swarming among the branches, eager to gather the sweet nectar. Soon this will be followed by the orange, lemon, grape-fruit, dogwood and magnolia, with many others.

In Florida, bee-keeping is not done as we do in the North. I have seen none but the natives, or black bees, and if they survive the millers all right, and if they gather any surplus, all right; and if they do neither, it seems to be all right any way, in this careless going State. Very little care is ever given them.

Now, being lonesome, and weary with aching, longing for some bees, I have fitted up a hive, frames and all, filled part with guide-combs, and have discovered a bee-tree. Now I am happy, and next week I will try the transferring from a rotten old tree, away in the swamp and water, to a new hive, clean and bright. I long to have them hum under my window, even though they are black. I have often transferred from a barrel, box, and nail-keg, but a rotten log is a "new deal." At some future time I will report progress.

Here in Florida, it is claimed that the honey from the yellow jessamine is poisonous, or at least makes people deathly sick who eat it. I should like to know as to the truth of this claim.

C. F. GREENING.

Orange Park, Fla., Feb. 23, 1893.

An Aged Bee-Keeper's Plan to Introduce Queens.

MRS. JENNIE ATCHLEY:—I will say in the first place that I am in my 73rd year, so I am not able to get around much, but so far as I know, bees are kept upon the let-alone principle here. We are having very heavy weather in Spanish Fork at present, and we thank God for it, as it means plenty of water this year. We have but little rain in Utah, so we must irrigate our crops.

No, my plans of introducing are not too good to give away, and if I give them to Jennie Atchley I know what she will do with them. What? Why, she will give the plans to everybody else, of course.

Here is one way: I put the queen into a spiral-wire cage, with a cork of comb to keep her in the cage. I then go to the colony I want to introduce her to, kill the old queen, put the cage with the new queen between two combs, have by my side a cup of honey, put some of it on each side of the cage, and all I wish on top of the frames. I do this about four or five o'clock in the afternoon. That is one way.

Here is another: Take a nucleus with its queen, and introduce to any colony that has no queen, or you can go to the

colony you wish to introduce to, and remove the old queen. Now, have with you a sheet of paper—any kind of thin paper will do, or a newspaper is good. Lay it over the top of the hive, and place the nucleus with the queen on top. The bees will do the rest.

I suppose these plans are as old as Adam, but I have never lost a queen with either way, but I have with all other plans that I have tried.

CHAS. W. LEAH.

Spanish Fork, Utah.

Bees in a Hive with Crooked Combs.

MRS. ATCHLEY:—I write to ask you if you would advise me to set an empty hive over a colony that has combs so crooked that I cannot handle them? I see that is the way Root's "A B C of Bee-Culture" says to do, and I ask what you think about it? F. A. GARDINER.

Friend Gardiner, I would not think of setting an empty hive over one with their combs built crooked, as that is a very slow way, and does not always prove satisfactory. Just take off one side of the hive and smoke the bees out of your way, and cut out the combs, brushing all the bees that adhere to the combs into a new hive, and tack in (see "Transferring," page 205 of the BEE JOURNAL for Feb. 16th)—only yours are in a frame hive already, and it is box-hives the directions are given for; but fasten in your combs the same. I will add that it is best to leave out all drone-comb, or place it in the outside frames; this I forgot in my transferring directions. J. A.

Florida, the Land of Flowers.

It does not seem possible that at the North there can be so much snow and ice, when here fruit-trees are blooming, and the air is so soft and warm. The bloom of peach trees is large, and of a beautiful dark pink, and bees fairly swarm upon them. The ti-ti is blooming, and very fragrant, and bees are gathering beautiful white honey from it. Wild sage is in blossom, and residents say that it is the same variety that is to be found in California. Yellow jessamine is quite a favorite, and is trained up as an ornamental vine. All of the bees that I have seen in this immediate vicinity are small and black, and the hives are *non-de-script* affairs.

MRS. L. HARRISON.

St. Andrews' Bay, Fla., Feb. 27, 1893.

GENERAL QUESTIONS.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 25 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—Ed.

Carniolan Bees.

Are the Carniolan bees suitable for a climate that is not very cold, but very damp in winter? D. T. PHILLIPS.
Cornellus, Oreg.

We referred this question to Messrs. F. A. Lockhart & Co., of New York State, who have had much experience with these bees. They answer thus:

In reply to Mr. Phillips' inquiry, we will say that he will find that the Carniolans are suitable for any country where any other race of bees can exist, whether it be a country that is cold, hot, wet, or dry, as the Carniolan bee is a native of a cold and windy country; showing that they will succeed in any country, for they are used to rapid changes of temperature. The rough climate of the Alpine mountains has made them a strong, robust and hardy race, for they have been hemmed in by mountains for centuries, and that no other race of bees could possibly have endured.

We have handled the Carniolans by the hundred colonies, for the past six years, and upon a series of observations and demonstrations with different races of bees as to gentleness, activity, prolificness, working qualities, and their ability to withstand climatic changes in cold regions, we give the highest preference to the Carniolans.

F. A. LOCKHART & Co.

Uniting and Feeding Bees.

I have 3 colonies of Italians, that were late swarms, hived in common boxes. No. 1 is in a soap-box, No. 2 is in a cracker-box, and No. 3 is in a nail-keg. Quite an apiary, isn't it? Nos. 1 and 2 were bought for 25 cents apiece, and hauled 15 miles. They have no more stores. No. 3 had fall honey from golden-rod, and is also out of stores. On Jan. 26th I brought No. 2 out of the cellar, the thermometer registering 50°.

I fed syrup in a plain feeder outside, and placed a screen cage over the box. The heat of the sunshine induced them to fly, and they discharged their feces (a dark-colored, odorless fluid) all over the cage, and at night, when I put them in the cellar, half of them were dead.

On Jan. 27th I examined Nos. 1 and 3, and seeing no cappings on the bottom-board, I concluded they were out of stores. The day being warm (50° above zero), I decided to bring all the colonies out of the cellar. They had a good cleansing flight, and I fed them syrup. There were no dead bees. I returned them all to the cellar.

Now, as all the colonies are weak, and have no stores, could I, on the first warm day, take away the queens from two of the colonies, and unite all in the soap-box, which has the most combs, and feed by placing white comb honey in sections beneath the cluster? Perhaps you would say, let 'em starve, but I being a beginner, do not wish to lose them, as by trying to bring them through the winter, I will get hard-earned experience. All the bees combined now number only about 20,000.

J. C. WALLENMEYER.

Evansville, Ind.

No, don't "let 'em starve." After confinement in the cellar, bees are not very hard to unite, and you hardly need trouble to kill two of the queens. The bees will look out for that. But you must look out that the honey you feed is not out of reach of the cluster, for it's no use to give them honey if they cannot reach it.

Moving Bees in Winter.

I have an apiary that I wish to move a few miles from where it is now located. What time would be best for moving it—at the present time on sleighs, with a splendid track and lots of snow, or not until spring and warm weather? I have the hives packed away in large cases out-doors, with four hives in a case, and space enough between each one to fill in some two inches of leaves, and the same around the inside of each case. Would it do to have help enough to place those cases on sleighs as they are, already packed at this time of year, and shift them to their new location? We have had some four weeks of very severe winter weather here, and if they would do to change this time of the year, would it be advisable to leave them until after we had a few warm days, and they had

a flight, as they have been confined for a number of weeks?

I have 121 colonies in the apiary that I wish to move, and I took some 8,000 pounds of surplus honey from them last season. They were all in fine condition on Oct. 10th, when I put them away. I fed back just before packing them, some 600 pounds of honey, and weighed them up, all told, to 60 pounds. So far they appear to be wintering splendidly to all appearances. This locality is in all respects first-class, this section of country being well adapted for white clover, Alsike, blue-gloss, and any amount of basswood.

F. FINCH.

Southwold Station, Ont.

It may be best for you to wait until spring has advanced enough so that you will be safe in expecting the bees to fly as soon as put on their new stands, or two or three days later. It certainly does bees no good to be disturbed in the winter, and it may do harm.



Cause of the Difference in Size of Queen-Bees.

Query 862.—1. What is the cause of the difference in the size of queen-bees? 2. Are the larger queens to be preferred to the smaller? 3. Why? 4. Is it in the bee-master's power to insure the production of large queens?—New York.

1. Better nursing. 2. Yes. 4. Yes.—DADANT & SON.

1. Food and care. 2. As a rule, yes. 4. Yes, practically.—J. H. LARRABEE.

1. Strength of colony and amount of food. 2. I don't know. 4. I think so.—EUGENE SECOR.

1. The same as makes the difference in the size of people. 2. Not necessarily. 4. Yes.—C. C. MILLER.

1. I don't know. 2. As a rule, yes. 3. They are better developed. 4. I don't know.—J. M. HAMBAUGH.

1. I think the cells in which they grow. 2. I prefer them. 3. Expect better results. 4. I think it is.—JAS. A. STONE.

1. The size of queens may be increased or diminished by breeding with that end in view. 2. I prefer them. 4. It is.—A. B. MASON.

1. I don't know. 2. I prefer large queens, every time. 3. I think they are more prolific. 4. Yes, by careful selection.—C. H. DIBBERN.

1. The difference in method of rearing. 2. As a rule, yes. 3. They are apt to be stronger, better developed, more prolific, longer lived. 4. Yes.—JAMES A. GREEN.

1. I don't know. 2. No. 3. They have proven to be no better than smaller ones. 4. No doubt, to some extent, by selecting and breeding in that direction.—S. I. FREEBORN.

Such effects are brought about by various and numerous causes; but as a usual thing a large queen is the most valuable. A good, healthy, active queen is to be preferred above all.—WILL M. BARNUM.

1. Food, temperature, parentage, and general thrift. 2. Yes, as a rule. 3. For the same reason that a well-developed specimen of any animal is better than a "runt." 4. To a large extent.—P. H. ELWOOD.

1. The strain and breeding. 2. Yes. 3. If you are a practical man, just stop and think why a fine, large, strong, vigorous queen is better than a small, inferior queen. 4. To a great extent, yes.—H. D. CUTTING.

1. I am not a queen-breeder, and don't know. 2. I would say yes. 3. I should expect them to be more prolific, would be easier found, and more sure to be kept in the brood-nest by an excluder. 4. I think it is.—E. FRANCE.

1. Sometimes it is the season, and sometimes the way they are reared. 2. Yes. 3. They are stronger, and I think usually more prolific, and I should expect a larger race of workers from such queens. 4. Yes.—MRS. L. HARRISON.

1. Inherited characteristics, and early feeding while yet larvæ. 2. If more prolific, of first-class workers, which should be the best of quality. 4. I think we could breed in any direction. Mere size is not alone a desirable end.—A. J. COOK.

1. Difference in the development conditions. 2 and 3. Large queens are to be preferred to smaller ones, but we often see small queens more prolific than some large ones. 4. To a great extent—by observing the laws of queen-development.—J. P. H. BROWN.

1. It may be caused by ancestry, or from lack of care during development. Traits of family character very often overbalance stature. 2. All things considered, yes. 3. Good evidence of strength and faultless development. 4. Largely.—MRS. J. N. HEATER.

1. I don't know any more than I know why there is a difference in the size of poultry of the same stock. 2. I do not think they are. It can only be told by testing. 3. A good queen can only be told by her progeny, and large queens use the same sized cells that the small ones do. 4. I don't think it is, as yet.—J. E. POND.

1. Some are smaller by nature, and some because of defects in the method of their rearing. 2. Yes, if not abnormally large. 3. Because they are likely to be better developed. 4. Yes, in so far as he can select the parents and control the nourishing, etc., of the immature queen.—R. L. TAYLOR.

1. The queen honey-bee is the result of development, and this fact alone removes all surprise why they vary in size. 2. Not always, and perhaps seldom. The medium size is preferable. Nothing that is over big of its kind, or over small of its kind, is likely to be the best. 4. Yes, by proper management he may have his queens fully developed.—G. W. DEMAREE.

1. Temperature and the amount of food given the larvæ. 2. Abnormally large queens are seldom good layers; so also are the small ones, as well as short lived. 4. Yes, good, normally-developed queens; but I claim that they must be fed for queen development from the time the egg hatches, to get the best laying, most vigorous, long-lived queens.—G. L. TINKER.

All queens are small when not laying, and increase in size just in proportion to the number of eggs they are laying each 24 hours. Queens which are reared under favorable circumstances are usually of about the same size when they are virgins, and queens should never be reared under other but favorable circumstances; hence it is in the bee-masters' power to rear queens of the normal size.—G. M. DOOLITTLE.

1. Generally those started from the egg, or very young larvæ, and well fed from the beginning, are large and well developed. 2. Not always. I have had small queens that were very prolific, and I have had large ones that were valueless. The largest and finest looking one I ever had, never laid an egg, though she was in a good, strong colony in the height of the breeding season. I prefer a queen normal in size, that looks wide-awake. 4. It is in the bee-keeper's power to secure well-developed queens.—M. MAHIN.

1. There are only two main causes. In the first place, some good queens produce small, slim queens that are just as good as any, as far as I can see. In the second place, any queen reared from a larva too old, will likely be small, a poor layer, and short-lived. 2. The larger queens are usually preferred by me, unless it is in the stock, as first mentioned. 3. On account of her stout looks and general appearance; however, the largest queens are not always the best—any of them, large or small, will turn out to be worthless sometimes. 4. Permit me to select my queen mothers, and I will insure you large queens.—MRS. JENNIE ATCHLEY.

CONVENTION DIRECTORY.

Time and place of meeting.

1893.
April 5, 6.—Texas State, at Greenville, Tex.
A. H. Jones, Sec., Golden, Tex.
April 6, 7.—Kansas State, at Ottawa, Kans.
L. Wayman, Sec., Chanute, Kans.
Apr. 10, 11.—Utah, at Salt Lake City, Utah.
R. T. Rhee, Sec., View, Utah.
April 18.—Colorado State, at Denver, Colo.
H. Knight Sec., Littleton, Colo.
May 4.—Susquehanna Co., at Montrose, Pa.
H. M. Seeley, Sec., Harford, Pa.
May 4.—Allegany Co., at Belmont, N. Y.
H. C. Farnum, Pres., Transit Bridge, N. Y.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller... Marengo, Ills.
VICE-PRES.—J. E. Crane... Middlebury, Vt.
SECRETARY—Frank Benton, Washington, D. C.
TREASURER—George W. York... Chicago, Ills.

National Bee-Keepers' Union.

PRESIDENT—Hon. R. L. Taylor... Lapeer, Mich.
GEN'L MANAGER—T. G. Newman, Chicago, Ill.



Report of the Cortland Union Bee-Convention.

Written for the American Bee Journal
BY C. W. WILKINS.

The Cortland Union Bee-Keepers' Association met in annual session at Cortland, N. Y., on Jan. 24, 1893. The meeting was called to order by President J. L. Kinney, and the reports of Secretary and Treasurer were read and approved, after which an opportunity was given the members to pay their annual dues.

The following officers were elected for the ensuing year:

President—Marion R. Wood, of Cortland.

Vice-President—Miles Morton, of Groton.

Secretary—C. W. Wilkins, of Homer.

Treasurer—T. T. Barrows, of Groton.

It was voted to give their Secretary, in the future, a salary of \$1.00 for each meeting, to be paid at the succeeding meeting when his report is approved.

At the request of the Secretary the Association will meet for their spring meeting at his residence, three miles northwest of Homer village, at the call of the committee. It was voted to make these spring meetings, which are held among the various members of the association at their invitation, a basket picnic, and thus share the burden and labor of supplying the assembly with lunch.

BEE-ESCAPES.

The discussions were opened by the questions, "What Has Been Your Experience with Bee-Escapes? Are they a Success?"

These questions were answered mainly by Mr. Morton, who had had more experience with them than any bee-keeper present. He pronounced them an entire success in his yard; especially so in the clearing of bees out of extracting supers, which they did quickly, and in a very thorough manner.

WINTERING BEES UNDER SNOW.

The question which has agitated the thinking powers of the apiarist, in this latitude more than any other which has been brought to bear, we believe to be found in the above words, and their discussion *pro* and *con*.

Some of those present preferred their colonies to remain underneath the snow, as the wind might leave it piled above the hive tops until the warm weather of approaching spring caused the snow to become heavy and damp; then they wished it removed before the dampness penetrated the hives. Others thought it much better to keep the hives free from snow, especially in front, claiming that their bees wintered much better in those hives where the wind kept the snow swept away, than in those covered underneath. This latter argument is based upon the point that bees, as nature gave them instinct, seek homes in hollow trees, crevices in the rocks, etc., where they are subject to the prevailing temperature, which is generally low enough to keep them in a semi-dormant condition, with the exception of perhaps an occasional flight.

When we place a colony of bees in a hive and allow them to become covered with snow to a depth of perhaps several feet, and remain thus, the order of nature is tampered with, and the "little busy bees," as they liven up with a higher temperature, imagine "spring has come with its birds and flowers," and they immediately begin to "hustle" to increase their numbers. "What is the hurt in that?" you ask. Simply this: The snow is finally removed, or melts away; the bees are brought more nearly in contact with the prevailing temperature; they find out they have been too "fast;" they have used up their honey in brood-rearing before the flowers "got there," and now their young chills in the cell, and they die with what is commonly called "spring dwindling;" or, if their stores should all have been consumed, starvation will have preceded all other ailments. Is this exaggerated? We honestly believe not.

OPENING HIVE-ENTRANCES IN WINTER.

This subject received quite a spirited and lengthy discussion. The preference seemed to be in favor of leaving a little snow over the entrance, or in not raking out the dead bees and refuse so as to hasten (or allow if it could be prevented) the flight of the bees until the temperature should reach 48° or 50° Fahr., when it would be possible for all bees in

a healthy condition to regain their wings, if they should alight on the snow.

MARKETING HONEY.

"Would it not be better for bee-keepers to be united in demanding a reasonable price for their honey at home, and not send to commission men and overload some markets, thus knocking down prices in all sections, and having to take whatever the conscience of these men will not allow them to keep for their commission, which, by the way, in some instances, isn't much?"

The above question received some spirited remarks, especially upon the unlimited resources of "middlemen."

SECTIONS PARTLY FILLED.

"What shall we do with the partly filled sections?" was asked. Some had tried feeding a few colonies in the endeavor to get the sections completed, but with indifferent success. It was thought best to extract those which were not full enough to be profitable to sell as light weights.

KEEPING COMBS FROM MOTHS.

This was the last subject discussed. Some preferred hanging them up singly; others fumigate them; placing them on hives, and allowing the bees to protect them, had been practiced with success where the colony was large. The only objection to the latter method seemed to be the lowering of the temperature of the brood-nest by the addition of unnecessary room in early summer.

The convention then adjourned subject to call of the committee.

C. W. WILKINS, Sec.

Report of the Central Bee-Keepers' Convention.

Written for the American Bee Journal

BY J. E. LYON.

The Arapahoe and Jefferson county bee-keepers met at Methodist Episcopal church in Berkeley, Colo., on Feb. 15, 1893, for the purpose of organizing a local bee-keepers' association.

The meeting was opened by prayer by H. D. Seckner, and then organized themselves into a bee-keepers' association, to be known as the Central Bee-Keepers' Association, with 22 charter members.

The following were elected as officers:
President—W. L. Porter, of Berkeley.

Vice-President—Mrs. Greer.

Secretary—J. E. Lyon, of Villa Park.

Treasurer—V. De Vinney, of Villa Park.

The regular meetings are to be held the second Wednesday of each month at the M. E. Church in Berkeley, at 10 a.m.

Come one and all, and don't forget to bring your dinner basket, and have a good time.
J. E. LYON, Sec.



Stock or Beveridge Willow and Basswood for Bees.

Written for the American Bee Journal

BY GEORGE J. FOSTER.

But few people are aware of the immense value of the common Stock or Beveridge willow for bees in the early spring months.

The very first tree to put forth its flowers in spring is the Beveridge willow, and the eagerness with which it is sought after by the bees one can hardly imagine; they will travel miles to find such pasture, which produces a wonderful flow of honey in a very short time.

Every bee-keeper should see that his apiary is provided with say a half acre or more of these willows, which will pay for themselves the second year after planting. Nothing is more easily grown, and they may be planted in some low or wet land in any out-of-the-way part of the farm considered worthless, and which will in this way become the most valuable part of it.

The trees should be planted three feet apart in the row, with rows six feet apart. This willow delights in a rich, black, damp soil, and in such a situation will flourish with the least of care.

Take an ordinary breaking-plow, and turn one deep furrow each way, leaving what is called a "hollow furrow" where the row of trees is to stand; then place the trees along this furrow at equal dis-

tances apart, say three feet. The planting is done very rapidly with a boy to hold the tree in an upright position in the center of the hollow furrow. A man can, with a spade, very quickly throw in sufficient soil from the furrow that has been thrown out to cover the roots and hold the tree in place; then, with the foot, press the earth firmly down on them, take the plow again and turn what remains of the furrows towards the row of trees, and the work is complete. They should be plowed a few times the first season to keep down the weeds, and after this they will care for themselves.

This willow is very hardy, never winter kills, and is sure to furnish an annual and an abundant crop of flowers. Trees about six feet in height are the most desirable for planting out.

AMERICAN LINDEN OR BASSWOOD.

Another tree of great value for bees is the American linden or linn (basswood). Coming into flower later in the season they fill a very important place in the bee-keepers' pasture.

The linden is also one of our very best lawn or shade trees; being a tree of noble form and rapid growth, very hardy, and also free from all insect pests, it is one of the most desirable of all our American shade trees.

Every bee-keeper should see to it that his place is well supplied with this best of all honey-producing trees.

The American linden being easily transplanted, any one can grow them, and we need more of these shade and honey trees.

Planted in groves 25 feet apart, they also furnish excellent wind-breaks, and with their large, round leaves are very showy in the summer season.

Bloomington, Ills.

[Mr. Foster, who kindly contributes the above article, is Secretary of the Phoenix Nursery Company, of Bloomington, Ills., whose advertisement may be found on page 346 of this number of the BEE JOURNAL.—ED.]

Bee-Stings and Rheumatism— Wintering Bees.

Written for the American Bee Journal
BY WM. STOLLEY.

Of late I have seen several times mention made of this subject in the BEE JOURNAL. Many years ago I read about

an old forester in Germany, having been cured from a severe case of rheumatism of long duration, by the stings of bees. As near as I can remember, the report was as follows:

The old forester, for years very much crippled and afflicted with rheumatism, was a bee-keeper. One day he went tottering to take a look at his bees, and as it happened, stumbled and fell against a hive and upset it. Being clad only in thin trousers and shirt, he was terribly stung by the enraged bees, and it was expected that he would die from the effect of the numerous stings he had received. But the final result was the other way. In a few days the old man got quite well, and was entirely cured of rheumatism.

Acting upon this report, I had occasion, some seven years ago, when a sister-in-law of mine was suffering with rheumatism, to apply the same remedy. She had tried, for a long time, the treatment of various highly-reputed physicians, and still no relief would be obtained, from all the medicines she took internally, nor the liniments used externally on the parts most afflicted.

So, one day I called at her house accidentally, and found her suffering very much with inflammatory rheumatism in one of her knees. I suggested to her to try the bee-sting cure, which she promptly agreed to. I at once went home to my apiary and got a lot of bees, and applied six of them around about the affected knee, and, strange to say, that in about a week, and after another application of four more bee-stings, she was cured completely. She was 63 years old at the time when this experiment was made.

Again, three and four years ago, a daughter of ours (13 years old) was quite sick with rheumatism in one foot and shoulder, and I applied the same remedy. The effect was always a good one, and two or three bee-stings applied at the place most affected, would bring instant relief, and she would go to sleep soon after the application.

I subsequently, and before the attack of rheumatism came again, sent her for one winter season to the sunny South in Texas, near the Gulf of Mexico, and since then she is not any more troubled with rheumatism.

These instances may induce sufferers from rheumatism to try the bee-sting cure, and be benefited. I, myself, do believe that a dozen bees can do more to cure rheumatism than a hundred physicians possibly can. Their (the bees') remedy is applied with a point, is to the

point, and goes directly where it is most needed, and not into the stomach when the foot is afflicted. The good effect is felt almost immediately after the stings have been applied, it seems.

HOW THE BEES ARE WINTERING.

Since I last reported (Dec. 2, 1892) the wintering of bees (out-doors) has been very satisfactory. On Dec. 8th we had 8°, Fahr., below zero, and on Dec. 26th 24° below zero.

On Jan. 4, 1893, my bees had a good general, cleansing flight. Then, again, on Jan. 13th we had zero weather, and on the 15th the thermometer registered 10° below zero, and kept at zero (at sunrise) on the 16th, 17th and 18th of January.

On Jan. 20th and 21st my bees had again a good flight, when the thermometer registered 54° above zero in the shade. We have had but very little snow so far (Jan. 21st), and the bees are in the best possible condition. Should they have another good flight in the month of February, then I shall expect them to winter safely, as usual for the last 12 years, that is, without loss.

Grand Island, Nebr.

What to Do With Bees Affected With Diarrhea.

Written for the American Bee Journal
BY DR. C. C. MILLER.

I have received the following letter about bees affected with diarrhea:

"I write to ask if there is anything I can do to help my bees. I have 13 colonies in the cellar, and they all have the diarrhea, are spotting their hives badly, and have a bad odor. I cannot give them a flight for some time yet. I have your book, 'A Year Among the Bees,' and Newman's 'Bees and Honey,' and take the AMERICAN BEE JOURNAL, but can't find anything to help me out of my trouble. AUSTIN REYNOLDS."

The thing needed above all things is a good flight for your bees, and possibly you can't do much better than to wait patiently, and hope warm weather will soon come. Even if it should be warm enough for a day for them to fly now, I'm not sure but I would rather risk them in the cellar than to take them out to stay. And if you take them out on a fine day for a flight, and then put them back again, somehow that doesn't seem to work first-rate.

I have considerable faith in warmth, and if I were in your place I'd try right hard to raise the temperature of the cellar up to 50° or more. If there is any way you can have a stove in the cellar, especially a hard coal-stove, that's the thing. If the cellar is small, heated stones or jugs of water may do, but don't have hot water without having it corked up tight to prevent steam getting out. Possibly hot stones right on the hives would help, only they must not melt the combs in the hive.

If I couldn't have a fire in the cellar, I think I'd try to get on the good side of the women-folks, and get possession of the kitchen about dark, unless there is some other room more convenient. Manage to have the room very warm, but not light. Bring up the bees (you might try it first on a part) and keep them up to a good heat for several hours. I don't think it would hurt if they should go up to 80°, but mind there must be no light from the stove.

Likely they will come out of the hives in great numbers, running all over the hives, or else hanging out in great clusters. Don't be too badly scared over that; very likely they'll get back again.

Toward morning, when they have cooled off and quieted down, you can return them to the cellar. But suppose at that time they are largely out of the hives, and not in shape to be handled. Well, commence early enough so that if they have not quieted down, you can open up doors and windows and cool them off before daylight.

If there comes a time when it is as warm at night out-doors as it is in the cellar, open up the cellar doors and windows, and give them a good airing out. Very likely they will roar so as to make you think they are all going to ruin, but by morning they'll be quiet.

If a good day comes for a flight, I think I'd let them out, and then put them back at dark. Report success.

Marengo, Ills., March 2, 1893.

A "Michigander's" Experience in Modern Bee-Keeping.

Written for the American Bee Journal
BY S. D. CHAPMAN.

In the spring of 1881 my brother and I started with a few colonies of bees. At that time northern Michigan was away down near where the *Bee-Keepers' Review* is now printed. We soon heard from it up in Newaygo county, and it

has been bobbing back and forth on that latitude ever since. I don't think it has ventured as far north within 100 miles of my location.

We increased our bees to about 80 colonies in the year 1888. It was a good year for honey, and we took as high as 130 pounds of comb honey, and over 200 pounds of extracted, per colony. Our bees were all hybrids, yet they gathered so much honey that it was almost impossible to sell it all, as our home demand was light.

At this time I was taking our excellent bee-periodicals, and I soon found to follow the line of progressive bee-keeping it was very necessary to keep pure Italians, so I decided to change immediately. Let me say right here, that when I start for deep water I wade right out until there is but one little bald spot left for "Old Sol" to shine on. Just so with the bees.

I purchased pure Italian queens by the dozen from all parts of the United States. The next season I gave them plenty of room, and watched them closely. I found they commenced breeding early, and they stuck right to it until the middle of October, consequently they consumed every pound of honey they had gathered. They not only solved the problem of a home demand for all my product, but two years I bought sugar by the barrel to appease their avaricious appetites; still I stuck right to them until I discovered that one following progressive bee-keeping was always away in the rear. Now, I am not built that way. My locality demanded modern ideas and modernized bees, radical changes were necessary—often, too.

First I purchased some of the celebrated strain of "red clover bees." I had plenty of clover. This strain of bees in other localities was bringing in large yields of red clover honey annually. I found the bees all right, but the honey—well, it resembled Fay's comet—makes its appearance once in 7 or 8 years.

Next I tried some of the "best bees in the land." Here we have bees designed expressly for terraqueous purposes—all you have to do is to bury them up and they will root, hog or die. Here is some bees that "just roll in the honey." Now this rolling process struck me most favorably, and I still think if my apiary was only situated on a steep side hill, they would prove decidedly a success—they could roll down, roll up, tumble up, any way to get up.

Next, my brother purchased a selected

tested Golden Carniolan queen, expressly for breeding purposes. The breeder of this fine queen kindly requested us not to rear any queens from this stock to sell, for a certain length of time; just then we thought we had got "the tip." With more than ordinary interest we watched this colony for a whole season. We found this new race of bees are very dark, more so than any we had in nearly 200 colonies, hardly one-half of them show a yellow band. We sometimes almost think they are hybrids, yet they hum around about the same as other bees, and we felt proud that we were able to show to our bee-keeping friends some of the "old original yellow race of bees."

After trying these different strains of bees, and several others, I felt some better; still I knew there was something wrong, either in the bees or in the management. All at once I discovered I had not one queen—no, not a solitary queen in the whole yard reared upon "scientific principles." That was enough. I ran to the house, pulled off my coat, and back I came into the yard, pushed the bees one side, and went to work. Within thirty days I turned out from 80 to 100 queens according to specifications. Now all these fine queens were mated to "hand-picked" drones, and right here is where the success of the whole business lies—we should hand-pick, or at least winnow, our flock of drones at least six or eight times during each season. I think now my success is assured. All I lack is a little more experience. But the fraternity may rest assured that this part of the State will keep apace with modern apiculture.

Mancelona, Mich.

The Hasty Conclusions of Some Apiarian Writers.

Written for the American Bee Journal

BY DR. A. W. TUFTS.

I wish to enter a protest against the practice of jumping to conclusions without sufficient data or evidence to base those conclusions upon. We can see the fault, or the effects of it, in nearly every bee-paper that we read for any length of time.

Some one makes an experiment in some field of apiculture, perhaps perfectly satisfactory to himself, however insufficient he may be prepared by practice, or inefficient his equipments may be for the purpose; and forthwith he

gives the results of his experiments to a waiting, eager, and weary world. And then what are they worth to any one? Has he proven them? No! If they were proven, they would be true; but that the opposite is the case any one can see by reading the "Mysteries of Bee-Keeping" or the "A B C of Bee-Culture," or any standard work on apiculture, and verify the assertions of these observers in the apiary.

Now, after reading the chapters in these standard works, on laying workers, and then seeing them in the act of depositing eggs, and watching these eggs hatch drones, just as this writer said that they would do; after reading Cook and Cowan on the anatomy of the honey-bee—that workers are females to all intents and purposes, their only defect being a want of development; and then to be told that some one "don't think" that they ever lay eggs—I say I don't think, but that I know that that writer bases his conclusions on insufficient evidence.

Another has found a laying queen in an upper story from which he is morally certain that there is no means of egress (a virgin queen can go through a pretty small hole). In opposition to the teachings of the above writers, as well as those who have made a careful and studious observation of the habits of the queen, and her habits for years, he jumps to the conclusion founded on insufficient evidence, that queen mated and became fertilized in the hive! He sits down and writes to Mr. Doolittle, giving his views, and when Doolittle suggests not only the possible or most probable, but veteran bee-keepers will say the certain solution to the difficulty or problem—a hole in the super—the bee-keeper answers, "I am not that kind of a bee-keeper." While he may not be the kind of a bee-keeper that tolerates, or has a hole in a hive, I ask in all candor and earnestness, what kind of an observer is he who takes a single incident or accident like that to contradict and overthrow all the evidence that goes to prove that queens mate only in the air?

Another follows some plan of introducing queens—more than likely it is an old one, discarded years ago by the veterans, or one that involves more work and fussing with the bees than queens, bees and all are worth, or as much time as to sit over them in a July sunshine and guard them with a shot-gun, to prevail on them to behave themselves; yet up he bobs serenely with an infallible

method of introducing queens that is the joy of his heart. He would impart it to the AMERICAN BEE JOURNAL or *Gleanings*, Alley or Doolittle, for a small consideration.

Yes, I can safely say that, like taxes and the bill collector, they are always with us—those that jump to conclusions, and base their assertions upon insufficient evidence. Every season some one proves on these insufficient data that bees do steal eggs for the purpose of rearing a queen. The authors of text books quoted above tell us that it may be done, that it is not impossible, or rather that they are not prepared to doubt its possibility; yet they have never seen it, and their language implies a doubt.

Twice during my bee-keeping experience I have been almost certain that I had almost proven that bees do steal eggs; but after losing several queens, and having valuable cells torn down, I instituted a rigid search through the colony, and found an old queen only capable of laying, or at least she only laid, an occasional egg here and there, from which the bees were trying to rear a queen—I might say, to supersede her, but that would be jumping to a conclusion. As I destroyed her, I have no evidence as to what would have taken place. So my triumph where Root had failed—ignominiously failed—many times. Had it not been for my rigid training as a physician, I would have rushed into print with an account of my success, based on insufficient evidence, that would have been a reminder of my folly in after years, when more careful experiments, or the evidence of others, had overthrown my ill-based deductions.

Pity the editors, pity the readers, pity the writers, who have these so-called facts in articles attempting to prove that which we all know, or may know, are without sufficient data to make them of any value whatever, continually thrust before their eyes, and offending their judgment of the fitness of some men to observe even trivial matters connected with our beloved pursuit. If what I have written seems harsh or pitiless, it refers as much to myself as others, for who can stand in judgment on his own pet theories, or see the weak places in the evidence that supports them?

Musson, La.

Have You Read that wonderful book
Premium offer on page 325?

Management for Wintering Bees in the Cellar.

Written for the American Bee Journal
BY GEO. T. GUNN.

Two weeks ago, when looking over my bees in the cellar, I found one colony that showed signs of diarrhea. There were 30 or 40 spots on the alighting-board and front of the hive that were unmistakably fresh voidings.

They were pulling dead bees out of the entrance, and making some noise (not roaring). Those they dragged out were large, and when pressed with the finger, would burst.

I knew that a cleansing flight would cure them, but that was out of the question with the mercury below zero. But something had to be done, so I took them out of the pile and pried the cover off—it was an inch board, and was glued down tight. It came off with a snap, that brought quite a number of bees up to see what was the trouble. The combs were clean, and smelled sweet, so I put the cover on again, with a piece of section under each corner.

The mercury was at 40° in the cellar then—a few days before it had been down to 33°. I put a kerosene-oil lamp on the floor near the hive, with a piece of building-paper around it, to keep the light from the bees, and shut up the cellar.

The next day I found the mercury at 52°, and the colony quieter, so I removed the lamp. One week later I examined them, and found no fresh voidings, and the dead bees at the entrance were dry and shrunken, and they were very quiet. To-day they are still quiet, and I think they are all right.

I am a firm believer in cellar wintering. I have yet to lose my first colony in wintering, but I lost one by mice getting in and eating them; they gnawed a rather too large entrance larger.

My bee-cellar is under my dwelling-house, and is also my house-cellar. In it are kept potatoes, beets, etc. My wife also keeps lots of flowers there. It has two doors, one of wire screen inside, which is covered with building-paper in the winter; the outer doors are slanting to shed rain. These doors are opened several times a day to get things out of the cellar, but I do not see that it does any harm, if they are not left open more than a minute or two, until towards spring, when they must be kept closed to keep the light out, or the bees will leave the hives.

I put the bees into the cellar soon after Thanksgiving Day, or just before, if there is snow. I like to haul them to the cellar on a hand sled, and then the snow comes handy to cover the entrance with while handling them. Entrances are open full width of the hive. The hives are piled three or four deep around the cellar, with the backs to the wall. The lower tier is on scantlings.

Towards spring the doors are opened at night, and the bees are watered by throwing snow on the alighting-boards. They are put out for a flight as soon as the weather is warm enough, then put back until settled warm weather comes.

Wall Lake, Iowa, Jan. 31, 1893.



Do not write anything for publication on the same sheet of paper with business matters, unless it can be torn apart without interfering with either part of the letter.

Looking for a Good Season.

Bees have done well so far. I have lost one colony out of 38, all on the summer stands. I hope the AMERICAN BEE JOURNAL may prosper the coming year, and that I may share in prosperity also. I look for a good season.

THOS. C. KELLY.

Slippery Rock, Feb. 2, 1893.

Fine Honey Season Expected.

I have kept a few colonies of bees for the last 16 years. I make my own hives 12x16 inches in the clear, and 12 inches deep, with 8 frames. I never bothered with the bees on the summer stands before, but this winter caught me; I lost 15 colonies, which leaves me 30, all in good condition. Most of them died with plenty of honey.

I got but little surplus honey last summer, but I think we are going to have a fine honey season this year. My bees have been working a little for three or four days, and carried the first pollen to day from the maple.

F. W. WIEDEMANN.

Equality, Ills., Feb. 26, 1893.

Disastrous Season to Bee-Keeping.

The past season has been the most disastrous to bee-keepers, throughout this locality, that they have experienced in 20 years. So far as I can learn, not a pound of surplus honey was gathered, and over 50 per cent. of the bees went into winter quarters short of stores, and notwithstanding the large amount of feeding done, fully 25 per cent. are starving, which, added to the 25 or 30 per cent. losses already sustained from the extreme cold weather, so unusual in this latitude, leaves the majority of bee-keepers very much disgusted, giving the pursuit a blow from which, I fear, it will take many years to recover.

J. W. BARRINGER.

Berryville, Va., Feb. 20, 1893.

Temperature of the Weather.

If the following notes can be of any value to the "weather bureau," which was published on page 24 and on page 248, I submit them with pleasure from my daily note-book. The temperature was taken each day between 10 and 11 a.m.:

The degree columns below denote—1st, the exterior temperature; 2nd, temp. in middle of hive; 3rd, temp. at the side of hive on the last frame.

Oct.									
11	64°	94°	88°	28	53°	89°	81°		
12	64°	94°	88°	29	56°	89°	80°		
13	59°	92°	87°	30	50°	89°	80°		
14	69°	93°	87°	31	49°	89°	78°		
15	70°	94°	88°	Nov.					
16	73°	94°	87°	1	53°	89°	78°		
17	65°	92°	87°	2	61°	90°	79°		
18	63°	92°	87°	3	65°	90°	79°		
19	65°	92°	86°	4	51°	90°	79°		
20	64°	92°	88°	5	35°	87°	77°		
21	64°	92°	88°	6	43°	89°	77°		
22	63°	91°	88°	7	57°	89°	77°		
23	64°	91°	88°	8	62°	89°	77°		
24	48°	90°	87°	9	40°	88°	77°		
25	48°	88°	82°	10	41°	88°	77°		
26	47°	88°	82°	11	39°	88°	77°		
27	52°	89°	81°						

The bees were active nearly every day, except during a sudden change. The colony from which the temperatures were taken is on the roof, the hive facing the south, and is at present doing well.

(MRS.) CARRIE B. AARON.

Philadelphía, Pa., Feb. 1, 1893.

No Flight for 100 Days.

Last fall I left on the summer stands 75 colonies, from which I took 3,000 sections of honey the last season, and they started into winter in fine condition. All were in double-walled hives, and well packed, but they have not had a flight for about 100 days, and they

are getting uneasy now, and I am afraid that they will suffer badly if they do not get a chance to fly pretty soon. Last winter was a very hard one on bees here; I lost from 75 colonies down to 50, and in May and the first of June I thought that we would not get any honey or swarms, but when they did commence to gather honey I never saw them build up faster or store honey more rapidly.

J. H. MANCHESTER.

Preble, N. Y., Feb. 22, 1893.

Wintering Well—Long, Cold Winter.

I have 20 colonies of bees in chaff hives, and I think they are wintering well. We have had a long, cold winter.

MRS. S. A. DAVENPORT.

Roseville, Ills., Feb. 28, 1893.

Bees Flying in Winter.

I put my bees into the cellar on Nov. 19, 1892, and there has not been a warm day since. Would it do to let the bees take a flight the first warm day, even if the snow is two feet deep? or is it better to leave the bees in the cellar until the spring, when the snow is gone?

JOHN PETERSON.

Weyauwega, Wis., Feb. 7, 1893.

[Read Dr. Miller's article on page 300 of this number of the BEE JOURNAL, which will doubtless help you.—Ed.]

A Colorado Report—Mongrel Bees.

Six summers ago I came to this the Uncompagre valley, with 7 colonies of bees, in the month of June. I got 375 pounds of comb honey, and 3 swarms. The next spring I started in with 10 colonies, increased to 27, and secured 2,000 pounds of comb honey. These were the results from black bees.

The next spring I introduced 2 Italian queens, spread them out "muchly," and obtained an average of 175 pounds. My average gradually fell off to 120 pounds, until last year our State only reported one-fourth of a crop, but my average was 65 pounds. My black bees are still ahead—and I am unable to find any other bee-keeper who has made that average, even where they run part of their bees for extracted honey, and have been trying to follow Mr. S. E. Miller's plan of buying queens to improve their stock. Climate and locality may account for the wide difference of opinion on these two races of bees, but what I

have stated is no guess-work—it is on record.

Now I, like all bee-keepers, would like to get a race of bees that would produce more honey, but, when I think about it, there is one great difficulty that stares me in the face. There passes my house every fall, large herds of cattle; they are range cattle, and among them may be seen samples of all the different breeds that were ever imported to America—a perfect mongrel herd; and why? Because in a range herd they cannot be purely mated. The American people are also a mongrel race, and cannot be purely mated, still we are a pretty good, all-purpose "gang;" and may we not with some degree of reason hope that the many experimenters and speculators in queen-bees may still leave us a good, all-purpose strain of bees, though mongrels they be, in spite of all the queens we may buy to improve our stock?

Montrose, Colo.

WM. WILLIS.

An Octogenarian Subscriber.

I have every volume of the AMERICAN BEE JOURNAL yet published. I commenced in 1866, and afterward procured Vol. I. For many years, at the conclusion of each volume, I had them neatly bound in cloth. It is highly improbable that I shall subscribe again, having attained my 81st year.

W. P. TAYLOR.

Fitzroy Harbor, Ont.

[We hope our aged friend may be spared yet many years to enjoy life and the old AMERICAN BEE JOURNAL.—Ed.]

First Experience with Bees.

Last summer I got 4 colonies of bees, and that was my first experience. I was bothered all summer with one colony being queenless half the time, but I got 140 pounds of honey from the others. All colonies have plenty of honey to last through the winter. I read the BEE JOURNAL, and try to keep posted.

W. W. GARDNER.

Chanute, Kans., Feb. 23, 1893.

Your Neighbor Bee-Keeper

—have you asked him or her to subscribe for the BEE JOURNAL? Only \$1.00 will pay for it for a whole year. And, besides, you can have Newman's book on "Bees and Honey" as a premium, for sending us two new subscribers. Don't neglect your neighbor! See page 325



PUBLISHED WEEKLY BY

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Convention Notices.

UTAH.—The semi-annual meeting of the Utah Bee-Keepers' Association will be held in Salt Lake City, Utah, on April 10, 11, 1893. All interested are cordially invited.
View, Utah. R. T. Rhees, Sec.

PENNSYLVANIA.—The Susquehanna Co. Bee-Keepers' Association will hold their 12th semi-annual meeting at the Tarbell House in Montrose, Pa., on Thursday, May 4, 1893. All are invited.
Harford, Pa. H. M. Seeley, Sec.

NEW YORK.—The next meeting of the Allegany County Bee-Keepers' Association will be held at Belmont, N. Y., on May 4th, 1893, in the Hotel Belmont. All bee-keepers are invited to attend and make it what it should be—an interesting meeting.

H. C. FARNUM, Pres., Transit Bridge, N. Y.

COLORADO.—The adjourned meeting of the Colorado State Bee-Keepers' Association will be held in the Charles Block, corner 15th and Curtis Streets, Denver, Colo., on April 18, 1893. Business important to all honey-producers will come before the meeting.
Littleton, Colo. H. KNIGHT, Sec.

KANSAS.—The Kansas State Bee-Keepers' Association will hold their annual convention at Ottawa, Kansas, on April 6 and 7, 1893. All bee-keepers are cordially invited to attend this convention, and make it one of the most interesting ever known. There will be a good programme. Bring something to exhibit.
Chanute, Kans. L. WAYMAN, Sec.

TEXAS.—The Texas State Bee-Keepers' Association will hold its 15th annual convention in Greenville, one mile north of the Court House, at the apiary of Mrs. Jennie Atchley, on Wednesday and Thursday, April the 5th and 6th, 1893. One of the biggest bee-meetings ever held in the South is anticipated. Everybody is invited. No hotel bills to pay. Come one, come all, and let us have a lovely meeting, and an enjoyable time. All bee-keepers invited to bring along something to exhibit.
Golden, Texas. A. H. JONES, Sec.

Webster's Pocket Dictionary we offer as a premium for sending *only one new* subscriber with \$1.00. It is a splendid Dictionary—and just right for a pocket.

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, March 11th, 1893:

CHICAGO, ILLS.—Honey is about cleaned up so far as fine comb is concerned. Quite a good deal of poor to fair is on sale, prices ranging from 13 to 15c. Fancy would bring 18c. Extracted, 6@8c. Beeswax, 25c.

R. A. B. & Co.

CHICAGO, ILL.—Fancy stock is very scarce, with plenty of inquiry, with good prices offered for same. It sells readily at 18c.; No. 1 comb, 16@17c. Dark sells slow. White extracted, fair supply, with good demand at 8½; dark, 6@7c. Beeswax—23@25c. J. A. L.

CINCINNATI, OHIO.—There is a fair demand for extracted honey at 6@8c. There is no choice comb honey on our market, and prices are nominal at 14@16c. for best white. Beeswax—Demand good, at 24@27c for good to choice yellow. Supply good. C. F. M. & S.

NEW YORK, N. Y.—Demand for comb honey is very light. White fancy stock is well cleaned up. The market is well stocked with off grades and buckwheat, and prices are irregular. Extracted is in good demand and stocks are light. We quote: Basswood and white clover, 8@8½c.; buckwheat, 6@6½c.; Southern, 7@7½c. per gallon.

Beeswax—25@27c.

H. B. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality. 1-lbs. Beeswax is neglected at 22@23c.

S. L. & S.

BOSTON, MASS.—Honey is selling slow and prices are lower. Best 1-lb. comb, 16@17c.—Extracted, 8@10c.

Beeswax—None on hand

B. & R.

KANSAS CITY, Mo.—Demand good, supply very light. White 1-lbs., 16c. Extracted, 6@7c. No beeswax on the market.

H. & B.

MINNEAPOLIS, MINN.—The market is good. We quote: Fancy white clover 1-lbs. sell fast at 18c.; 2-lbs. 16@17c. Buckwheat, comb, 13@14c. Extracted, in barrels, 7@8c.; in 5 or 10 lb. kegs., 9@10c.

J. A. S. & C.

KANSAS CITY, Mo.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs. 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs. 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6.

Beeswax—20@23c.

C. M. C. C.

ALBANY, N. Y.—Our stock of honey is light and also receipts. Demand keeps up better than usual this season. We are selling white comb honey at 14@16c.; mixed, 12@13c.; dark, 10@11c. Extracted, white, 9@9½c.; mixed, 7½@8c.; dark, 7@7½c. Beeswax, 28@30c.

H. R. W.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

"Bees and Honey"—see page 325.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 161 South Water Street.
J. A. LAMON, 44 & 46 South Water Street

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.
HILDRETH BROS. & SEGELKEN,
28 & 30 West Broadway.

San Francisco, Calif.

SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.

J. A. SHEA & Co., 14 & 16 Hennepin Avenue

Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.
CLEMONS-MASON CO. Co., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

The World's Fair Women

"Souvenir" is the daintiest and prettiest book issued in connection with the World's Fair. It is by Josephine D. Hill—a noted society lady of the West—and contains superb full-page portraits and sketches of 31 of the World's Fair women and wives of prominent officials connected with the great Fair. It is printed on enameled paper, with half-tone engravings, bound in leatherette. We will send it postpaid for 75 cents, or give it for two new subscribers to the BEE JOURNAL at \$1.00 each.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at 10 cents per line, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

EXCHANGE for Bees or Supplies, \$160 in Poultry Cuts, \$40 Organ Pedals, Attachments for Piano, or First-Class Printing.

L. JAQUES, Chatham Gtr., N. Y.

WANTED—A lady partner as a wife, that is a bee-keeper or that would like to learn the bee and poultry business, with a few thousand dollars to go into the bee and poultry business on a large scale; between the ages of 25 and 50 years. All letters answered. Good reference given. D. BROTHERS,
11A2t Saratoville, Noble Co., Ohio.

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